Arizona

Statewide Communication Interoperability Plan (SCIP) Implementation Report

October 2012

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The Statewide Communication Interoperability Plan (SCIP) Implementation Report provides an annual update on Arizona's progress in achieving the initiatives and strategic vision identified in the SCIP[1]. Further, this information provides the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) with a clearer understanding of Arizona's capabilities, needs, and strategic direction for achieving interoperability statewide.

As required by Congress, States provide updates and changes to the status of their Statewide Interoperable Communications Plans. Each State created a SCIP in 2007 and all have been regularly updated. The report sections match those required in the original SCIP, and extensive instructions were provided to the States to understand the requirements of these sections and assist in the development of their SCIPs. The initiatives within each report include milestones identified in the NECP which will be standardized, as well as State-specific efforts.

State Overview

Overview of the State and its interoperability challenges:

Arizona has a total area of approximately 113,000 square miles, which makes it the sixth largest State in the United States. There are two major desert environments: the lower desert and the high desert. Each desert has its own special set of requirements for equipment, protection, weather conditions, and environmental concerns. The major natural disasters that impact Arizona are fires and flooding.

Arizona is bordered by the States of New Mexico, Utah, Nevada, and California, and the country of Mexico. Arizona shares a 389 mile international border with Mexico that is mostly unregulated and unprotected. Major challenges exist in adequately patrolling the area due to the limited number of existing border patrol resources. Arizona has bi-national agreements with Mexico that outline each party's mutual support role in times of emergency or disaster, and also provide for training and exercise opportunities.

The most economically important port in Arizona is Nogales. Nogales is one of the four primary ports of entry between the United States and Mexico. Almost $19 billion in trade comes through this port annually, with 89 percent of all surface mode trade (e.g., truck, rail) between Arizona and Mexico passing through Nogales.

Arizona's critical infrastructure is focused around water, electricity, and telecommunications. The State has more than 400 dams, of which 130 are classified as requiring critical infrastructure protection. Hoover

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[1] http://www.azpsic.gov/plans/AZ_SCIP_2012_001_07172012.pdf

Dam, the largest freshwater reservoir in the United States, is a major component of the State's infrastructure because of the lakes, water supply, and hydroelectric production linked to its operation. It is also a major supplier of electric power to the western grid, which includes the States of Arizona, California, and Nevada.

The Palo Verde Nuclear Generating Station, the largest nuclear power generation facility in the United States, is on 4,000 acres of land and produces over 30,000 gigawatt-hours of electricity annually to serve approximately four million people in Phoenix, Arizona and Southern California. In addition, some of the Nation's largest defense industrial contractors have facilities located in Arizona.

Arizona's population is growing rapidly, and Phoenix is one of the fastest-growing cities in the United States. The 2010 Census estimates the statewide population of Arizona at 6.4 million citizens, with the Phoenix metropolitan area (Maricopa County) having a population of 3.8 million and Pima County at 1 million residents. These two counties represent 75 percent of Arizona's population.

Arizona is home to 22 federally-recognized tribes that occupy a combined landmass of 21 million acres, or approximately 25 percent of the State's land. Over 28 million acres of the State's landmass is Federal land, making it important to have Federal participation in the interoperable radio systems deployed in Arizona.

Arizona has approximately 170 law enforcement agencies, 255 fire districts, 78 ground ambulance companies, and 18 licensed air ambulance companies. Arizona has approximately 15,000 sworn law enforcement officers and 9,000 correctional officers. Arizona has approximately 11,524 certified Basic Emergency Medical Technicians (EMTs), 40 certified intermediate EMTs and 5,488 certified Paramedics.

Vision and Mission

Overview of the interoperable communications vision and mission of the State:

Arizona's SCIP initiatives have a timeframe of 1 to 8 years (2012 - 2020). Arizona's SCIP was revised in 2012 and approved by its Statewide Interoperability Governing Body (SIGB), the Public Safety Communications Advisory Commission (PSCC) on July 17, 2012. (See the Governance section below.)

Vision: Arizona is pursuing a vision for statewide interoperability that will enable public safety and service agencies/organizations to have access to quality interoperable communication systems, to be adequately trained, and to utilize such systems effectively in multi-disciplinary, multi-jurisdictional incident response.

Mission: The mission for Arizona's SCIP is to advance public safety communications interoperability statewide. Elements and strategies presented in Arizona's SCIP support this ongoing mission.

Governance

Overview of the governance structure, practitioner-driven approaches, and funding:

Arizona's governance is a multi-level structure established to oversee interoperable communication efforts within the State.

The Public Safety Interoperable Communications Office (PSIC Office) in the Arizona Department of Administration - Arizona Strategic Enterprise Technology (ADOA-ASET) is responsible for advancing interoperable communications in Arizona and supporting the Public Safety Communications Advisory Commission (PSCC or Commission) and Statewide Interoperability Executive Committee (SIEC or Committee) in performance of their missions.

PSCC (Arizona's SIGB) was organized in 2000 and established under Arizona State law in 2004. Arizona's PSCC is legislatively enabled as an advisory body for statewide interoperability efforts. PSCC consists of 15 governor-appointed members reflecting multi-disciplinary public safety and emergency management agencies including representatives from police, sheriff's office, fire, emergency medical services (EMS), communications and State agencies. Appointments to the Commission are made so that the existing five federal emergency response regions in the State are as equally represented as possible. The ADOA Director or his designee functions statutorily in the role of Chairman for PSCC. PSCC meets every other month to take actions in support of Arizona's SCIP and interoperability initiatives statewide.

The SIEC is a sub-committee of PSCC and is responsible for technical and operational recommendations to PSCC. SIEC also has authority over 700 megahertz (MHz), very high frequency (VHF), and ultra-high frequency (UHF) interoperability frequencies. SIEC has five members: two SIEC Co-Chairs appointed by PSCC and three members selected by the SIEC Co-Chairs. SIEC encourages broad participation in working groups from the public safety community including State, local, tribal and non-governmental

public safety/service representatives. The SIEC is supported by a number of workgroups that evaluate and make recommendations to the SIEC on operational and technical policies, standards and procedures, training, exercises and outreach, VHF, UHF and 700 MHz spectrum management, utilization of the Communications Asset and Mapping (CASM) tool and agreements between operational entities.

Arizona established a full-time statewide interoperability coordinator (SWIC) in November of 2008. The SWIC point of contact for Arizona is Lisa Dee Meyerson, Statewide Interoperability Coordinator & Manager of the PSIC Office.

The key functions of the PSIC Office are as follows:

- *Serving as Arizona's Interoperability Representative* – Arizona's SWIC and her staff serve as the principal State of Arizona contact to the federal government, and other states, regarding public safety communications interoperability initiatives. The SWIC and her staff also serve as the key point of contact for public safety and service agencies/organizations throughout Arizona in regard to public safety interoperable communications. As Arizona's interoperability representative, the PSIC Office is responsible for communicating with appropriate authorities regarding resources needed by Arizona, educating stakeholders regarding best practices from around the country, and participating in multi-state, regional, national and border initiatives with Federal, state, local, tribal and non-governmental partners.

- *Advancing Arizona's SCIP* – The second key function of the PSIC Office is advancing Arizona's SCIP which includes initiatives in each of the SAFECOM continuum lanes. This is accomplished through planning, consulting and implementation of projects managed by the PSIC Office and through oversight and monitoring of projects managed by others. The SCIP sets forth the lead agency for each SCIP Strategic Initiative as well as the supporting agencies for each of those initiatives.

- *Supporting Funding & Preparing Reports* – The PSIC Office pursues or supports pursuit of funding opportunities related to advancing interoperable communications, and interacts with multiple funding agencies including state, federal, local, tribal and non-governmental entities. The PSIC Office is also responsible for preparing or supporting preparation of numerous Federal, regional and State reports and responding to questions regarding their contents from stakeholders and policymakers[2].

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[2] http://www.azpsic.gov/library/reports/

- *Logistics & Operations* – The PSIC Office supports Commission, Committee and Workgroup meetings, develops action plans, Requests for Proposals (RFPs), Requests for Quotes (RFQs), and other documentation to support operations.
- *Stakeholder Engagement & Interactions* – The PSIC Office engages public safety stakeholders statewide to share information, identify needs and resources, participate in training and exercises, and ensure that stakeholder feedback is reaching PSCC and SIEC.

The State Administrative Agency (SAA) for the State of Arizona is the Arizona Department of Homeland Security (AZDOHS), and the SWIC serves on the Homeland Security Senior Advisory Committee (HSAC). The HSAC plays a critical role in homeland security efforts by working with AZDOHS to ensure coordination, collaboration and integration of homeland security preparedness initiatives across funding streams, disciplines, agencies, and all levels of government in Arizona, as well as offering advice in reference to homeland security issues. The HSAC also provides expertise to AZDOHS to ensure homeland security initiatives leverage Federal Department of Homeland Security (DHS) resources in addition to other State, local and Tribal resources.

Governance Initiatives

Governance is a formalized system that provides a unified approach to decision-making to implement shared objectives across multiple disciplines and jurisdictions. Strong governance is essential to interoperability because it provides a framework for planning, collaboration and implementation between and among multiple disparate communication systems and stakeholders.

Arizona is a leader in establishing and maintaining interoperable communications governance bodies and plans, which includes:
- A statewide governance body for interoperability (PSCC) established in statute.
- A technical/operational subcommittee (SIEC) operating in support of PSCC.
- A Statewide Interoperability Coordinator (SWIC) in the PSIC Office established in statute.
- A strong group of engaged stakeholders who participate in interoperability workgroups (that support development of policies and programs).
- A statewide plan for interoperability (SCIP) (updated annually) that is aligned with the national plan for interoperability (National Emergency Communications Plan or NECP).
- A plan for the SWIC Office (PSIC Office Plan) (updated annually) in support of SWIC activities.

This past year the PSIC Office made significant progress in:

- Advancement of statewide governance structures and planning efforts.
- Assessment of Arizona counties against national standards.
- Advocacy of governance for interoperability at the regional level.
- Incorporating the upcoming National Public Safety Broadband Network (NPSBN) initiative into our existing governance structures and SCIP.

Governance Structures: In the area of statewide governance structures and planning advancement, progress included:

- An annual update to Arizona's SCIP (approved by PSCC) to reflect support for development of a public safety broadband strategy, support for regional strategic planning efforts, and progress on the Arizona Interagency Radio System (AIRS) and the Strategic Technology Reserve (STR).
- Development of a SCIP Implementation Report for Federal DHS to track Arizona's progress.
- An annual update to the PSIC Office Plan which details how this Office will use its resources in alignment with AZ State statute and in advancement of Arizona's SCIP.

National Standards: In the area of assessment of Arizona counties against national standards, the PSIC Office completed a major effort to measure Arizona's progress towards meeting the goals outlined in the NECP (the nation's strategic plan to improve emergency response communications). With the cooperation of County Emergency Managers, the PSIC Office and observation teams from multiple jurisdictions conducted assessments of planned events in all Arizona non-UASI counties between February and September 2011. These assessments were modeled after the DHS assessments conducted of UASI counties for NECP Goal One. The results of these assessments are documented in After Action Reports (AARs) which include detailed observations and recommendations for improvement. The PSIC Office submitted the results of these assessments against national standards to Federal DHS in Arizona's 2011 SCIP Implementation Report and produced a compendium report that was distributed to Arizona's public safety community.

Regional Governance: In the area of advocacy of governance at the regional level, workshops were held in several counties to assist in the development of Tactical Interoperable Communications Plans (TICP). These plans follow a national framework, align with the NECP and the Arizona SCIP, and assist local jurisdictions to evolve governance structures in support of interoperability on the regional level.

The PSIC Office also coordinated strategic planning workshops to improve interoperability between public safety agencies in Maricopa County that participate in the Regional Wireless Cooperative (RWC) and the Topaz Regional Wireless Cooperative (TRWC).

Broadband: In the area of incorporating the upcoming National Public Safety Broadband Network (NPSBN) initiative into our existing governance structures and SCIP, PSIC continued efforts to research national standards while taking steps to position Arizona to take advantage of the NPSBN.

Following the passage of Public Law 112-96, the Middle Class Tax Relief and Job Creation Act of 2012, which includes provisions to fund and govern the NPSBN, members of the PSIC Office, Arizona Department of Homeland Security (AZDOHS), the Arizona Department of Public Safety (DPS) and the Arizona Department of Administration (ADOA) met with the Governor's staff to review the Act. During the meeting, it was determined that PSIC and ADOA-ASET will take the lead in developing a public safety broadband strategy and recommendations for the Governor's Office.

The PSIC Office plans to garner input and advice from PSCC, SIEC, Digital Arizona Program (ADOA-ASET), 9-1-1 Office (ADOA-ASET), DPS, AZDOHS and stakeholders statewide, in addition to other states & organizations at the federal level. The PSIC Office will serve as the central point of contact to ensure that all interested parties get uniform and consistent information about Arizona public safety broadband processes and plans, and that we become aware of all interested parties. The PSIC Office provides monthly briefing documents to the Governor's Office on this important initiative.

On April 17, 2012, PSIC briefed the PSCC on the current state of the NPSBN and authorized the formation of the Arizona Public Safety Broadband Network (AZPSBN) Workgroup. The AZPSBN Workgroup will provide advice and make recommendations to the PSCC on matters related to the NPSBN and the AZPSBN.

The following table outlines the strategic governance initiatives, gaps, owners, and milestone dates Arizona outlined in its SCIP to improve interoperable communications.

Initiative (Name / Purpose)	Gap (Brief Description)	Owner (Agency, Department, and/or POC)	Milestone Date (Month/Year)	Status (Complete, In Progress, Not Started)
NECP Initiatives				
Establish a full-time statewide interoperability coordinator or equivalent position.	None	PSIC Office	2008	Complete
Incorporate the recommended membership into the Statewide Interoperability Governing Body (SIGB).	None	PSIC Office PSCC	2004	Complete
Establish the SIGB via legislation or executive order.	None	PSIC Office PSCC	2004	Complete
Additional State Initiatives (include public safety wireless broadband related initiatives, as applicable)				
#1: Expand and Implement Interoperable Voice and Data Communications Governance Model and Plan	Arizona stakeholders must continually work to evolve the governance model and plans to further advance interoperability for Arizona.	PSIC Office PSCC SIEC Regional partners	2012	In Progress
#2: Develop Regional Communications Governance Structures	Arizona regions, counties, and/or localities need to develop and/or enhance governance structures to provide regionalized coordination and cooperation in pursuit of communications interoperability.	PSIC Office SIEC Regional Partners	2013	In Progress
#3: Implement a Strategy for Supporting National Level Goals Applicable to Regional, State, Local and Tribal Interoperable Communications	Arizona is committed to meeting the regional, state, local, and tribal objectives, initiatives, and milestones identified in the NECP and additional national guidance from FEMA, the FCC, and other federal entities. Areas within Arizona vary as to their level of compliance.	PSIC Office PSCC SIEC Regional Partners	Long-term	In Progress

Standard Operating Procedures

Overview of the shared interoperable communications-focused SOPs:

PSCC is legislatively charged with providing recommendations to the PSIC Office on the development of standards based systems to provide interoperability between public safety and service agencies/organizations statewide. The PSIC Office is the body tasked with development of statewide SOPs. Because the PSIC Office is managed by the Arizona SWIC, the development of the SOPs is well aligned and prioritized with other statewide interoperability initiatives.

Several entities in the public safety interoperable communications governance structure play a role in the development of statewide SOPs. The Technical and Operational Workgroups of SIEC consist of state and local practitioners throughout Arizona who contribute practical input and guidance in support of SOP development. Statewide SOPs are discussed in public meeting forums and stakeholder feedback is incorporated throughout the development process. Arizona's stakeholder engagement program (managed by the PSIC Office) creates awareness of the development work and assists with efforts to publicize and educate regarding SOPs.

AZDOHS has oversight responsibility for ensuring State plans are National Incident Management System (NIMS) compliant. Every jurisdiction in Arizona, either by ordinance or by order of the county executive, has implemented procedures to obtain and maintain NIMS and Incident Command System (ICS) compliance. An appointed NIMS compliance officer in each public safety agency is responsible for ensuring that SOPs and MOUs comply with NIMS and the National Response Plan. AZDOHS and the Department of Emergency and Military Affairs (AZDEMA) assist local and tribal governments regarding NIMS compliance through regularly scheduled NIMS training courses and outreach programs.

Documents for coordination of statewide interoperable communications include (1) the Arizona Interagency Radio System (AIRS) SOP, (2) the Arizona Minimum Equipment Standards, which detail minimum channel capacity, channel display, frequency range, narrowband capability and Project 25 (P25) capability, and (3) the Arizona Statewide Interoperable Channels Plan.

SOP Initiatives

A reliable policies, standards and procedures framework enables stakeholders to implement interoperability projects consistently across the State. During the past year, PSIC made solid progress on SCIP Initiative #4: *Establish a Policies, Standards and Procedures (PSP) Framework, and Implement PSPs, Including SOPs, for Statewide Interoperable Communications Solutions.*

Statewide policies, standards and procedures updated this year include:

- Interoperable Channels Plan - establishes requirements for programming of statewide and national interoperable channels into public safety radios, and provides guidance on the use of 16 specific channels in each of the VHF, UHF and 700/800 MHz interoperability spectrum.
- AIRS SOP – documents the policies and procedures for the use of AIRS (a suite of cross-banded mutual aid channels) in the VHF, UHF and 800 MHz bands.
- Communication Unit Training Coordination Procedure – a statewide procedure developed by the PSIC Office (with input from Arizona Division of Emergency Management (ADEM) and SIEC), to coordinate All-Hazards Communications Unit Training in Arizona. The procedure defines appropriate instructors for the All-Hazards Communications Unit position courses, how Arizona will develop a cadre of such Instructors, and how communications unit training courses can be requested.
- Arizona Regional All-Hazards Communications Unit Recognition Procedure – documents the process for requesting recognition at the Arizona regional level for communications unit positions that align with associated Federal DHS approved curriculum and task book.
- NIMS Communications Unit Workgroup (NIMS-CU) Policies and Procedures – documents the procedures that will be followed by this workgroup and the PSIC Office to review the qualifications of individuals seeking Arizona regional recognition for All-Hazards Communications Unit positions.

In addition, the PSIC Office has made progress in researching national standards with the goal of defining NPSBN related policies and standards for Arizona's public safety community.

The PSIC Office also advanced the Regional Communications Systems Connections (RCSC) project between the key regional systems in Arizona (RWC, TRWC, DPS, Maricopa County and Yuma Regional Communications System (YRCS)) with the goal of enabling effective emergency communications between and among their rapid response teams.

The following table outlines the SOP strategic initiatives, gaps, owners, and milestone dates Arizona outlined in its SCIP to improve interoperable communications.

Initiative (Name / Purpose)	Gap (Brief Description)	Owner (Agency, Department, and/or POC)	Milestone Date (Month/Year)	Status (Complete, In Progress, Not Started)
NECP Initiatives				
Tactical planning among Federal, State, local, and tribal governments occurs at the regional interstate level.	Need to continue to formalize and manage plans and assets	Regional Partners PSIC Office	2013	In progress
All Federal, State, local and tribal emergency response providers within UASI jurisdictions implement the Communications and Information Management section of the National Incident Management System (NIMS).	None	Federal, State, local and tribe emergency response providers	2007	Complete
Incorporate the use of existing nationwide interoperability channels into SOPs.	None	PSIC Office SIEC PSCC	2011	Complete
Update SCIP to reflect plans to eliminate coded substitutions throughout the Incident Command System (ICS).	None	PSIC Office SIEC PSCC	2011	Complete
Define alternate/backup capabilities in emergency communications plans.	None	PSIC Office Regional Partners	2011	Complete
Additional State Initiatives (include public safety wireless broadband related initiatives, as applicable)				
#4: Establish a PSP Framework, and Implement PSPs, Including SOPs, for Statewide Interoperable Communications Solutions	Arizona continues to develop a statewide PSP framework regarding interoperable communications. Furthermore, although some statewide interoperable communications SOPs exist, Arizona must update other SOPs and develop templates to ensure that future SOPs are developed in a consistent manner.	PSIC Office Regional Partners SIEC	2012	In progress

Technology

Overview of the technology approaches, current capabilities, and planned systems:

Arizona operates on multiple local, regional, and State shared land mobile radio (LMR) systems.

- The metropolitan areas have migrated to or are in the process of migrating to 700/800 MHz trunked P25 systems.
- State agencies operate mostly in the VHF or UHF radio bands, with some operating in the 800 MHz band.
- The majority of LMR systems serving the more rural areas of the State are conventional VHF or UHF systems.

Most counties also have gateway units, either mobile or at communications centers, where dispatching occurs. Police and fire agencies have caches of radios to exchange during special operations, large wildfires, or task force operations.

Major Systems

The following tables list the major systems in Arizona and include those used solely for interoperable communications, large regional systems specifically designed to provide interoperability solutions, and large wireless data networks.

Shared Statewide System[3] (Name)	Description (Type, frequency, P25 compliance, etc.)	Status (Existing, planned, etc.)
Arizona Interagency Radio System (AIRS)	A suite of full-time, cross-banded mutual aid channels (VHF, UHF, 800 MHz Conventional) designed to provide interoperable communications capability to first responders of police, fire, and EMS agencies, as well as other personnel of municipal, county, state, tribal, federal agencies and approved non-governmental organizations (NGO's) performing public safety and public service activities.	Existing and being enhanced

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[3] Shared statewide radio systems are typically designed to consolidate the communications of multiple State agencies onto a single system, thereby providing strong interoperability. Many States also make these systems available to Federal, local, and tribal agencies on a voluntary basis. In this case, local governments either chose to use the shared statewide radio system as their primary system, or they decided to interface their system to the shared statewide radio system creating a system of systems.

State Systems (Name)	Description (Type, frequency, P25 compliance, etc.)	Status (Existing, planned, etc.)
DPS Microwave Backbone Infrastructure	Analog technology; moving to digital; Southern Loop complete; Western Loop in progress	Existing and being enhanced
700 MHz System for State agencies (with possible usage by others)	P25 700 MHz digital trunked	In place in Southern region of the State; expansion in process by DPS in partnership with ADOT, YRCS and PSIC, subject to funding and digital microwave upgrade
Arizona Game & Fish, Arizona State Land, Arizona State Parks, Arizona Departments of Corrections, Agriculture and Juvenile Corrections	VHF conventional	Existing
Department of Public Safety	UHF conventional	Existing
Department of Transportation	VHF conventional, P25 700 MHz digital trunked	Existing
DEMA Radio Network (DRN)	VHF conventional	Existing
EMSCOM, Veterans Memorial Coliseum, Shared Government Operations	UHF conventional	Existing

Regional Systems (Name)	Description (Type, frequency, P25 compliance, etc.)	Status (Existing, planned, etc.)
Regional Wireless Cooperative (RWC) – City of Phoenix (Administrative Manager)	800 MHz P25, simulcast trunked	Existing
TOPAZ Regional Wireless Cooperative (TRWC) – City of Mesa (Administrative Manager)	800 MHz P25, simulcast trunked	Existing
Pima County Wireless Integrated Network (PCWIN)	800 MHz P25, simulcast trunked	In development
Yuma Regional Communications System (YRCS)	800 MHz P25, simulcast trunked	Existing and being expanded to other areas of the State in partnership with DPS, ADOT, PSIC and local communities (i.e., CRIT)
Central Arizona Project	800 MHz trunked	Existing
Maricopa County	800 MHz trunked (hybrid)	Existing; in transition to P25
Salt River Project	VHF conventional, UHF conventional, 800 MHz trunked (Open Sky)	Existing
Arizona Public Service	800 MHz trunked (analog)	Existing
Northern Arizona University and City of Flagstaff	800 MHz trunked (analog)	Existing; in transition to P25
Phoenix Fire Regional Dispatch	VHF conventional; 800 MHz P25, simulcast trunked (part of RWC)	Existing
Prescott regional communications	VHF conventional	Existing
Sedona fire regional	VHF conventional	Existing

Technology Initiatives

Arizona is currently pursuing a system-of-systems approach to interoperability, coordinating and encouraging interconnection of operability and interoperability communications assets to one another in order to provide communications between state, regional and local systems. Existing interoperability assets include shared systems, shared channels, gateways, radio caches and other communications technologies.

During the past year, PSIC and its partners continued advancing technology related SCIP Initiatives #5 to 9 as follows:

Enhance and Promote the AIRS Interoperable Communications Solution (SCIP Initiative #5) – AIRS is a suite of full-time, cross-banded mutual aid channels designed to provide basic interoperable communications capability in particular in populated areas of the State.

The initial planned AIRS build-out was completed in 2012 with installation of the final two AIRS Suites at Long Mesa (AIRS Region 3) and Jacob Lake (AIRS Region 2). Agencies that desire additional coverage in their region may purchase and install equipment to expand the current AIRS system. PSIC, in collaboration with DPS and SIEC, drafted a procedure to establish requirements for the integration of locally procured AIRS site communications infrastructure into the statewide AIRS system (maintained by DPS) in order to improve the overall coverage. The Plan provides guidance for initial approvals and ongoing maintenance responsibilities. The plan was approved by the SIEC on October 9, 2012.

Implement, Enhance and Promote Functional Regional Voice and Data Systems in Support of Interoperable Communications (SCIP Initiative #6) - Although some robust regional systems exist and other systems are under development, many areas within Arizona do not have access to regional shared systems and operate on individual agency systems making interoperability more challenging. The development of Strategic Communications Migration Plans (SCMP) and Tactical Interoperable Communications Plans (TICP) can support promotion of regional systems. (See SCMP and TICP project progress under Governance above).Lack of or inadequate connectivity between systems also hinders interoperability (See RCSC project progress under SOPs above).

Upgrade the Statewide Microwave Backbone Infrastructure to Digital Technology (DPS) (SCIP Initiative #7) – An upgraded digital backbone is required for Arizona to implement modern, standards-based, interoperable radio systems. The microwave backbone digital upgrade project by DPS/WSB continues to

make progress, albeit at a slower pace than planned due to resource and funding constraints. As a result of grant funding and partnerships around the state, DPS/WSB was able to complete 6 digital path upgrades in FY2012. A number of additional paths are also in progress. Due to resource constraints, the end date for the project has been amended to June 30, 2017.

Sustain the State Strategic Technology Reserve (STR) (ADEM) (SCIP Initiative #8) – A strategic reserve augments day to day assets to support continuity of operations. ADEM has advanced acquisition and deployment of such a reserve. The State Strategic Technology Reserve (STR) project by ADEM was completed in FY2012 with all remaining equipment purchased and deployed.

During the 2012 SCIP revision, Strategic Initiative #8 was changed from Implement the STR to Sustain the STR to reflect the progress made by ADEM. Arizona emergency management officials consider the Continuity of Government (COG) as the prime directive for the STR, with augmentation of the current reserves that are deployed throughout Arizona. Future activities related to the STR need to focus on actively engaging emergency planning and communications groups statewide through briefings on the capabilities and limitations of the STR, including access and deployment procedures, and ensuring that STR equipment and request procedures are consistently documented in all statewide emergency response plans, COG plans, and TICPs.

Upgrade Operable Voice and Data Communication Systems for State Agencies in Support of Interoperable Communications (SCIP Initiative #9) – Existing land mobile radio systems for AZ State agencies are in the process of being enhanced and will continue to be enhanced over time, subject to availability of funding.

Initiative #9 includes the RICO project which utilizes $2.2 Million in RICO funds for the advancement of communications interoperability along the southern Arizona border. The RICO Project deploys standards-based P25 communications capabilities at six key transmitter sites supported by DPS' upgraded digital microwave system, and supports hardware and software upgrades to the YRCS infrastructure. The Project provides high-level connectivity for existing and developing communication systems, thus increasing interoperability capabilities during multi-jurisdictional, multi-agency response and recovery, and mitigating impacts from critical incidents in the border region. As of the end of FY2012, five of the six transmitter sites were activated. Due to road access issues, the remaining tower has not yet been activated but will be installed by December 2012. The equipment is currently programmed and in staging at the Wireless Systems Bureau (WSB) of DPS.

Additionally, the RICO Project provides communications equipment to selected law enforcement dispatch centers and Public Safety Answering Points (PSAP) in the region. Through the creation of a Southeastern Arizona Communications Center Talk Group, the dispatch centers will be able to share information and coordinate efforts between participating agencies in the border region. This will alleviate the need for dispatchers to make a phone call or send a teletype every time they need to relay information to, or coordinate with, a neighboring jurisdiction. The talk group may also be used for situations such as requesting resource assistance (i.e., K9, helicopter, officers), broadcasting critical attempts to locate (i.e., missing children, carjacking, pursuit), and immediate notification of PSAP equipment failures/evacuations. A Memorandum of Understanding (MOU) and a draft Standard Operating Procedure (SOP) for PSAPs to utilize the Southeastern Arizona Communications Center Talk Group were developed by the PSIC Office with stakeholder input this past year and will be implemented next fiscal year.

Additional technology related activities included educating stakeholders on FCC narrowbanding requirements, which will impact public safety operability, and are therefore important for interoperability.

The following table outlines the technology strategic initiatives, gaps, owners, and milestone dates Arizona outlined in its SCIP to improve interoperable communications.

Initiative (Name / Purpose)	Gap (Brief Description)	Owner (Agency, Department, and/or POC)	Milestone Date (Month/Year)	Status (Complete, In Progress, Not Started)
NECP Initiatives				
Program nationwide interoperability channels into all existing emergency responder radios.	Many radios lack programming of nationwide interoperability channels; this programming is being encouraged by our Statewide Interoperable Channel Plan which includes these national channels.	Regional Partners	2011	In Progress
Additional State Initiatives (include public safety wireless broadband related initiatives, as applicable)				
#5: Enhance and Promote the AIRS Interoperable Communications Solution	The initial plan for AIRS sites has been completed; Agencies that desire additional coverage may purchase and install equipment to expand the current system in accordance with the AIRS	PSIC Office SIEC	2012	In Progress

Initiative *(Name / Purpose)*	Gap *(Brief Description)*	Owner *(Agency, Department, and/or POC)*	Milestone Date *(Month/Year)*	Status *(Complete, In Progress, Not Started)*
	Improvement and Sustainability Plan - a newly approved procedure that establishes requirements for the integration of locally procured AIRS communications infrastructure into the statewide system.			
#6: Implement, Enhance and Promote Functional Regional Voice and Data Systems in Support of Interoperable Communications	Although some robust regional systems exist and other systems are under development, many areas do not have access to regional shared systems and operate on individual agency systems. Lack of or inadequate connectivity between systems also hinders interoperability (See progress on RCSC project under SOPs above).	Regional Partners	Long term	In Progress
#7: Upgrade the Statewide Microwave Backbone Infrastructure to Digital Technology	An upgraded digital backbone is required for AZ to implement modern, standards-based, interoperable radio systems.	DPS/WBS	2017	In Progress
#8 Sustain the State STR	Augmentation of current reserves to support continuity of government	ADEM	2015	In Progress
#9 Upgrade Operable Voice and Data Communication Systems for State Agencies in Support of Interoperable Communications	Existing LMR systems for AZ State agencies are in the process of being enhanced and will continue to be enhanced over time, subject to availability of funding	DPS/WBS	Long-term	In Progress

Training and Exercises

Overview of the diversity, frequency, and inter-agency coordination of training and exercises:

The first type of training in Arizona occurs at the local jurisdictional and discipline level, and covers job basics, roles, and responsibilities. Additionally, each year local governments conduct their own training and exercise programs, which are generally multi-disciplinary and inter-jurisdictional within a county.

The second type of training and exercise program is conducted on a statewide level. ADEM within the Arizona Department of Emergency and Military Affairs (DEMA) has an extensive training and exercise program, with schedules posted on its website. ADEM actively recruits participants in its training classes by contacting local government emergency managers.

There are formal State training programs and train-the-trainer classes in the Homeland Security Exercise and Evaluation Program (HSEEP) process. ADEM has an outreach program for training and exercises, and offers FEMA Emergency Management Institute (EMI) programs, which include:

- ICS
- NIMS
- Professional Development Series
- Advanced Professional Series

The ADEM training program is designed to instruct emergency responders in NIMS and ICS. The Arizona State Land Department teaches and provides credentials for Communications Unit Leader (COML) and Communications Unit Technician (COMT) classes through the National Wildfire Coordinating Group (NWCG).

In terms of exercises, local, regional, and State entities across Arizona conduct public safety exercises to assess the effectiveness of training programs, demonstrate required job skills, practice coordinating with response partners, and test equipment, processes, and/or procedures. Exercises are conducted with other levels of government and regularly include After Action Reports and Improvement Plans.

Training and Exercises Initiatives

Implementing effective training and exercise programs is essential for ensuring that technology actually works as planned and that responders are able to demonstrate that they can effectively communicate using that technology.

Accomplishments during the past year regarding Training and Exercise initiatives and objectives include:

- Continued support for statewide AIRS Training program, including a DVD, lesson plan and other training materials to promote the use of AIRS frequencies statewide.
- Advancement of communications unit training and recognition program consistent with national standards and ADEM requirements.
- Support for offering of All-Hazards Communications Unit Leader (COML) training courses as well as All-Hazards Communications Technician (COMT) training.
- Developing a COML Field Day to support advancement of COML/COMT skill sets through a day long hands-on training event.
- Participating in exercises and events in support of Arizona communities.

The following table outlines the training and exercises strategic initiatives, gaps, owners, and milestone dates Arizona outlined in its SCIP to improve interoperable communications.

Initiative (Name / Purpose)	Gap (Brief Description)	Owner (Agency, Department, and/or POC)	Milestone Date (Month/Year)	Status (Complete, In Progress, Not Started)
NECP Initiatives				
Incorporate the use of existing nationwide interoperability channels into training and exercises.	Training and exercises are an ongoing activity of ADEM and local emergency managers. The use of nationwide interoperability channels are incorporated into training and exercises when appropriate.	Federal, State, local and tribal emergency response providers	2011	Complete
Complete disaster communications training and exercises.	Disaster communications training and exercise is an ongoing activity of ADEM and local emergency managers	ADEM	2011	Complete
Additional State Initiatives (include public safety wireless broadband related initiatives, as applicable)				
#10: Develop and Implement a Training Plan to Address Interoperable Communications	Arizona recognizes a need to coordinate communications-focused training opportunities statewide in order to ensure that appropriate users and stakeholders achieve and maintain mission critical interoperable communications competencies.	PSIC Office	2013	In progress

Initiative (Name / Purpose)	Gap (Brief Description)	Owner (Agency, Department, and/or POC)	Milestone Date (Month/Year)	Status (Complete, In Progress, Not Started)
#11: Develop and Implement a Strategy for Exercises Focused on or Incorporating Interoperable Communications	Arizona does not have a multi-year statewide comprehensive communications Training and Exercise Plan (T&EP that incorporates interoperable communications needs or capabilities.	PSIC Office	2013	In progress

Usage

Overview of the testing of equipment and promotion of interoperability solutions:

Local governments rely on interoperable equipment for day-to-day situations and emergencies. Equipment testing is done with federal, state, and local agencies, and failures are found through usage. Testing is not done on a regular basis; rather, equipment is usually evaluated during roll call or through drills and exercises.

Arizona does not use a common, statewide radio system with the exception of AIRS. AIRS is generally used for localized emergency incidents rather than regional interoperability. Mutual aid frequencies, on which AIRS operates, are usually not used for pre-planned events.

The concept of interoperability is promoted by PSIC through an evolving statewide outreach program, open public meetings, as well as a user-friendly website and regular communications to interested parties. The State encourages and coordinates collaborative efforts, and identifies and helps address state, regional, and local barriers to advancing interoperability solutions and usage. Outreach activities by the PSIC Office staff include: stakeholder engagement; information sharing; identification of needs and resources; and participation in training and exercises. The benefits and value of these outreach efforts are being realized through increased involvement in Workgroups, and the PSIC Office is actively sought for involvement in meetings, and to provide help and support for events statewide.

Arizona has developed partnerships with members of PSCC, SIEC and Workgroups as well as public information officers, communication managers, regional communication centers and emergency managers. These partnerships have allowed the State to leverage the knowledge and expertise of many individuals, to be able to share interoperable communication information with their constituencies, and at the same time bring back information to PSCC, SIEC and the PSIC Office for consideration.

Usage Initiatives

The PSCC and SIEC each met five times this past year and in these meetings approved interoperability projects and policies, heard updates from regional systems, provided guidance to and received technical advice from its workgroups, and provided significant feedback to PSIC regarding advancement of SCIP initiatives.

PSIC staff regularly attended and presented at conferences, workshops, expos, taskforces, and national, multi-state, State, regional, local and working group meetings. PSIC also conducted in-person meetings, web and telephonic conferences, posted updates to its website, and communicated regularly by e-mail to its extensive (850+) interested parties list.

The PSIC Office promoted collaboration among members of public safety and service agencies/organizations by updating the Statewide Education and Outreach Plan Regarding Public Safety Communications Interoperability. The Plan highlights specific targeted interoperability topics of significant importance in 2012:

- FCC Narrowbanding Compliance
- National Public Safety Broadband Network (NPSBN)
- NECP Gap Closure (including Regional Interoperability Planning, Communications Asset Survey and Mapping (CASM), TICPs, Strategic Communication Migration Plans (SCMPs) and other resources).

The following table outlines the usage strategic initiatives, gaps, owners, and milestone dates Arizona outlined in its SCIP to improve interoperable communications.

Initiative *(Name / Purpose)*	Gap *(Brief Description)*	Owner *(Agency, Department, and/or POC)*	Milestone Date *(Month/Year)*	Status *(Complete, In Progress, Not Started)*
#12: Create and Implement an Education and Outreach Plan in Support of Interoperable Communications	In a vast state with many remote areas and many critical public safety needs to address, it is difficult for all stakeholders to stay informed regarding critical public safety interoperable communications issues.	PSIC Office	2012	Completed Plan; Outreach is on-going